CASE REPORT

Robotically Assisted Excision of Ovarian Vein for Intermittent Ureteral Obstruction

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ABSTRACT

With the increasing popularity of robotically assisted procedures, new indications for robotically assisted surgery are being examined. Although open and laparoscopic surgical management of intermittent ureteral obstruction from ovarian vein syndrome has been reported previously, we report the first use of robotic assistance for ureterolysis and ovarian vein excision.

INTRODUCTION

Ovarian vein syndrome is a controversial disease in terms of diagnosis and treatment. Open and laparoscopic surgical management of intermittent ureteral obstruction from ovarian vein syndrome has been reported previously.[1–5] We present a case of documented intermittent ureteral obstruction with hydronephrosis due to a crossing ovarian vein. At our institution, we offer hand-assisted laparoscopic procedures as well as open procedures. The patient desired to avoid a flank incision or hand-port incision, and refused referral to a center that could perform the procedure with the pure laparoscopic approach or percutaneously. Due to patient desires and our technical ability, the consensus

Figure 1. Intravenous pyelogram demonstrating dilation and tortuosity of the upper ureter with dilation of the right pyelocalyceal system.

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was to utilize robotic assistance in excising the ovarian vein and performing ureterolysis. The patient was aware of all alternatives and informed consent was obtained.

Figure 2. Computed tomographic scan demonstrating a prominent crossing ovarian vein (horizontal arrow) and proximal hydroureteronephrosis (vertical arrow).

CASE REPORT

A 29-year-old, 4′9“, 85-pound woman with a history significant for intermittent right flank pain since the age of 19 was referred for evaluation. During her most recent episode of pain, an IVP was obtained and demonstrated right ureteral dilation to the mid ureter **(Figure 1)**. A double-J ureteral stent had been placed with complete resolution of her symptoms. After stent removal, a 3-phase CT of the abdomen and pelvis and renal flow scan with Lasix washout established the diagnosis **(Figures 2 and 3A)**.

After giving informed consent, the patient underwent robotically assisted ureterolysis and excision of the ovarian vein. In the 45-degree left flank up position, we utilized a 12-mm Hasson balloon port superior to the umbilicus, a robotic port 8 cm superior-lateral to the camera port, and another robotic port 8cm inferior to the camera port in the midline. An additional 12-mm assistant port was placed to the left of midline, and 8cm superior to the camera port.

After laparoscopic mobilization of the right colon with endoscopic shears, the robot was docked from the pa-

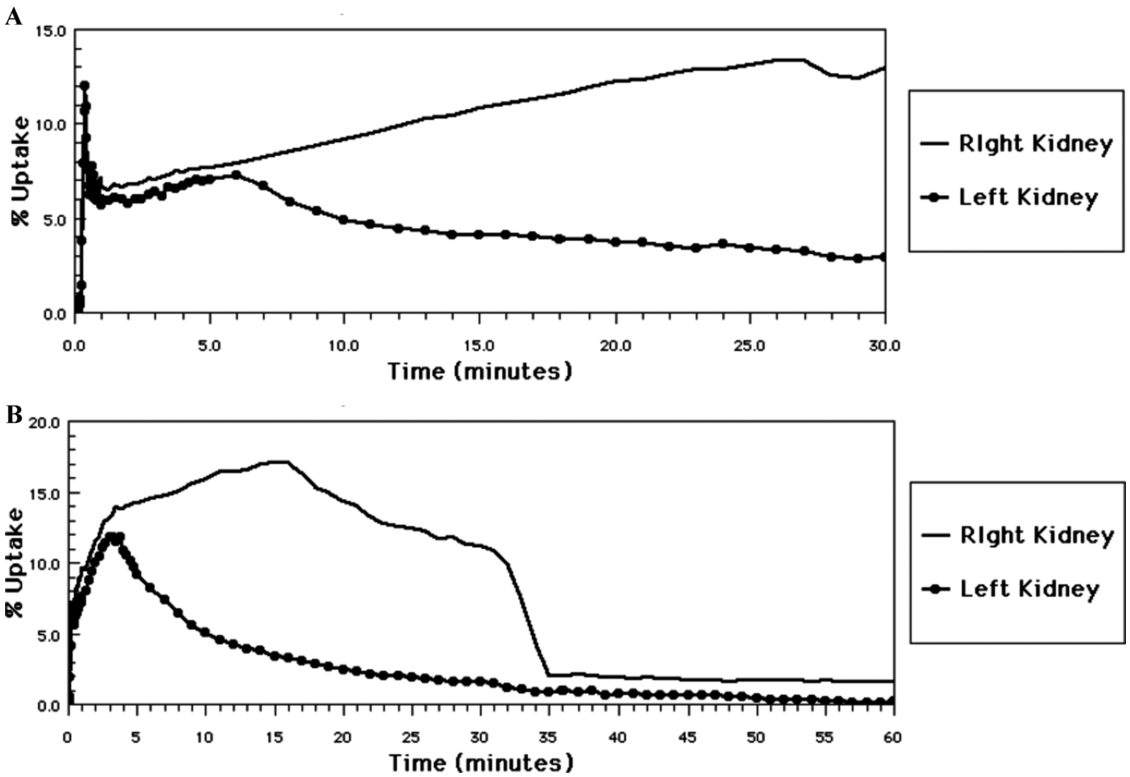

Figure 3. (**A**) Preoperative renal flow scan with washout demonstrating obstruction; (**B**) Postoperative renal flow scan with washout demonstrating no evidence of obstruction.

tient's right side. The duodenum was kocherized; the renal pelvis and ureter were quickly identified and dissected distally. A large confluence of veins was noted to cross the ureter at the pelvic brim. These ovarian veins were dissected from the ureter, secured with Hem-o-lock (Weck Closure Systems, North Carolina, USA) clips, and transected. Ureterolysis was performed at this level.

The total anesthesia time was 240 minutes, with 120 minutes of actual operative time (positioning/docking/dissection). The estimated blood loss was 25 mL. Pathologic examination revealed unremarkable venous tissue. The patient did not experience any postoperative complications and was discharged home on postoperative day 1.

At 6-weeks follow-up, repeat renal flow scan with Lasix washout demonstrated a slightly dilated right-collecting system without obstruction (**Figure 3B**). The patient has had no recurrence of flank pain.

DISCUSSION

Ovarian vein syndrome continues to be a rare diagnosis, and diagnosis by exclusion is essential in this often-confusing syndrome. Several management options for ovarian vein syndrome have been described, including conservative measures, embolization,[6] and surgical excision. Surgical excision, including ureterolysis,[4] has been reported by several authors who universally support the minimally invasive management.[1,3,5] The use of robotic assistance in the management of intermittent ureteral obstruction from a large ovarian vein was both safe and feasible, with excellent surgical results. The long anesthetic time in this procedure was related to anesthesia setup and the patient's slow recovery from the anesthetic.

References:

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